JFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:)	
)	Before the Examiner
Jingsong Xia et al.)	
)	Not Yet Assigned
Serial No. 10/701,047)	
)	Group Art Unit 2631
Filed November 4, 2003)	
)	
ADAPTIVE EQUALIZER HAVING A)	•
VARIABLE STEP SIZE INFLUENCED)	
BY OUTPUT FROM A TRELLIS)	
DECODER)	September 21, 2004

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure in accordance with 37 C.F.R. §1.56, Applicant wishes to bring to the attention of the Examiner the items of information listed on the enclosed Information Disclosure Citation Form. This information has not been previously submitted in this application, and has not been heretofore cited previously by the Examiner. Copies of all U.S. patents, foreign patent documents and non-patent literature are enclosed.

The undersigned hereby certifies that some of the items of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign

application.

I hèreby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

September 21, 2004

September 21, 2004

Date of Deposit

Troy J. Cole

Name of Registered Representative

Signature

September 21, 2004

Date of Signature

This Statement is not being submitted within three months of the issuance of the communication of the foreign counterpart application, however, this Statement is being submitted prior to the mailing of any Office Action on the merits in the present application. Therefore, no additional fees are believed to be necessary, however, should any fees be deemed required, the Commissioner is authorized to charge such fees to Deposit Account No. 23-3030, but is not to include payment of issue fees.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b).

Respectfully submitted

By:

Troy J. Cole Reg. No. 35,102

Woodard, Emhardt, Moriarty,

McNett & Henry LLP

Bank One Center/Tower

111 Monument Circle, Suite 3700

Indianapolis, Indiana 46204-5137

(317) 634-3456

Sheet

THE MEAN

WEMMH/SB/08A (4/03)

Approved for use through 10/31/2002. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

		_
	Complete if Known	
Application Number	10/701,047	
Filing Date	November 4, 2003	
First Named Inventor	Jingsong Xia et al.	
Group Art Unit	2631	
Examiner Name	Not Yet Assigned	
Attornev Docket Number	31075-128	

			U.S. PATEN	T DOCUMENTS	
Examiner initials*	Cite No. ¹	Document Number Number-Kind Code ² (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
		US - 4,567,599	01/28/1986	Mizoguchi	
		US - 4,712,221	12/08/1987	Pearce et al.	
•		US - 4,815,103	03/21/1989	Cupo et al.	
		US - 4,856,031	08/08/1989	Goldstein	
		US - 4,866,395	09/12/1989	Hostetter	
		US - 4,989,090	01/29/1991	Campbell et al.	
1		·US - 5,052,000	09/24/1991	Wang et al.	
		US - 5,134,480	07/28/1992	Wang et al.	
		US - 5,210,774	05/11/1993	Abbiate et al.	
		US - 5,311,546	05/10/1994	Paik et al.	
		US - 5,471,508	11/28/1995	Koslov	
		·US - 5,506,636	04/09/1996	Patel et al:	
		·US - 5,532,750	07/2/1996	De Haan et al.	
		US5,537,435	07/16/1996	Carney et al.,	
		US - 5,568,098	10/22/1996	Horie et al.	
		US - 5,568,521	10/22/1996	Williams et al.	

Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	76
Initials*	No.1	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Application of Cited Document	Relevant Passages or Relevant Figures Appear	T
		EP 0,524,559 B1	05/02/1997 Paik et al.			
		EP 0,752,185 B1	07/17/2002	Strolle et al.		
		WO 00/27033	05/11/2000	Tan et al.		
		WO 00/27066	05/11/2000	Jaffe et al.		
		WO 01/01650 A1	01/04/2001	Bourdeau ;		
		WO 01/13516 A2	02/22/2001	Jaffe et al.		

	_	
Examiner Signature	Date Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw time through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the emperor must precede the serial number of the patent document. ³ Kind of document by the ap0propriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1440A/DTO				Complete if Known				
Substitute for form 1449A/PTO		Application Number	10/701,047					
INFORMATION DISCLOSURE				Filing Date	November 4, 2003			
STAT	STATEMENT BY APPLICANT		First Named Inventor	Jingsong Xia et al.				
				Group Art Unit	2631			
(use as many sheets as necessary)			ecessary)	Examiner Name	Not Yet Assigned			
Sheet	2	of	5	Attornev Docket Number	31075-128			

			U.S. PATEN	T DOCUMENTS	
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
		US - 5,619,154	04/08/1997	Strolle et al.	
		US - 5,648,987	04/15/1997	Yang et al.	
		US - 5,692,014	11/25/1997	Basham et al.	
		US - 5,789,988	08/04/1998	Sasaki	
		US - 5,802,461	09/01/1998	Gatherer	
		US - 5,805,242	09/08/1998	Strolle et al.	
		US - 5,828,705	10/27/1998	Kroeger et al.	
		US - 5,835,532	11/10/1998	Strolle et al.	
		US - 5,862,156	01/19/1999	Huszar et al.	
		US5,870,433	02/09/1999	Huber et ala	
		US - 5,894,334	04/13/1999	Strolle et al.	
		US - 5,995,154	11/30/1999	Heimburger	
		US - 6,005,640	12/21/1999	Strolle et al.	
		US - 6,034,734	03/7/2000	De Haan et al.	
		US - 6,034,998	03/07/2000	Takashi et al.	
		US - 6,044,083	03/28/2000	Citta et al.	
		US - 6,069,524	05/30/2000	Mycynek et al.	

Examiner	Cite				Foreign Patent Document	Publication Date	Name of Patentee or Application of Cited	Pages, Columns, Lines, Where Relevant Passages or Relevant	T ⁶
Initials* No.'	No.	Country Code ³ -Number ⁴ -Kind Code ⁵ (If known)	MM-DD-YYYY	Document	Figures Appear				
		WO 01/43310 A2	06/14/2001	Jaffe et al.					
		WO 01/43384 A2	06/14/2001	Jaffe et al.					

Examiner Signature	 Date Considered	
	A CONTRACTOR OF THE CONTRACTOR	

EXAMINER: Initial II reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation it not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the emperor must precede the serial number of the patent document. ³ Kind of document by the apopropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English longuage. The applicant is a total place as the check mark here if English longuage. The applicant is a total place as the check mark here if English longuage. The applicant is a total place as the check mark here if English longuage. The applicant is a total place as the check mark here if English longuage. The applicant is a total place as the check mark here if English longuage. The applicant is a total place as the check mark here. here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 44404/DTO				Complete if Known			
Substitute for form 1449A/PTO		Application Number	10/701,047				
INFORMATION DISCLOSURE				Filing Date	November 4, 2003		
STA	STATEMENT BY APPLICANT		First Named Inventor	Jingsong Xia et al.			
			,	Group Art Unit	2631		
(use as many sheets as necessary)			ecessary)	Examiner Name	Not Yet Assigned		
Sheet	3	of	5	Attornev Docket Number	31075-128		

			U.S. PATEN	T DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
		US - 6,133,785	10/17/2000	Bourdeau	
		US - 6,133,964	10/17/2000	Han	
		US - 6,145,114	11/07/2000	Crozier et al.	
_		· US - 6,154,487	11/28/2000	Murai et al.	
		US - 6,195,400 B1	02/27/2001	Maeda	
		US - 6,198,777 B1	03/06/2001	Feher	
		US - 6,219,379 B1	04/17/2001	Ghosh	
_		US - 6,222,891 B1	04/24/2001	Liu et al.	
		·US - 6,226,323 B1	05/01/2001	Tan et al.	
		US - 6,233,286	05/15/2001	Wei	
		US - 6,260,053 B1	07/10/2001	Maulik et al.	
		US - 6,272,173 B1	08/07/2001	Hatamian	
		US - 6,275,554 B1	08/14/2001	Bouillet et al.	
		US - 6,278,736 B1	08/21/2001	De Haan et al.	
		US - 6,304,614	10/16/2001	Abbaszadeh et al.	
		US – 6,307,901 B1	10/23/2001	Yu et al.	
		US - 6,333,767 B1	12/25/2001	Patel et al.	
		US - 6,356,586	03/12/2002	Krishnamoorthy et al.	

Examiner Cite No.1	Cite	Foreign Patent Document	Publication Date	Name of Patentee or Application of Cited	Pages, Columns, Lines, Where	6
	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁶ (if known)	MM-DD-YYYY	Document	Relevant Passages or Relevant Figures Appear	
					7-11-11	
						
				1		ı

ĺ	Examiner Signature	Date Considered	
١			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the emperor must precede the serial number of the patent document. ⁵ Kind of document by the apopropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Cubatitut	Substitute for form 1449A/PTO		Complete if Known			
Substituti	Substitute for form 1449AVPTO			Application Number	10/701,047	
INF	ORMATION	DISC	CLOSURE	Filing Date	November 4, 2003	
ST	ATEMENT B	Y AP	PLICANT	First Named Inventor	Jingsong Xia et al.	
				Group Art Unit	2631	
(1	use as many shee	ts as r	ecessary)	Examiner Name	Not Yet Assigned	
Sheet	4	of	5	Attornev Docket Number	31075-128	

U.S. PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear			
		US - 6,363,124 B1	03/26/2002	Cochran				
		US - 6,411,341 B1	06/25/2002	De Haan et al.				
		· US - 6,411,659 B1	06/25/2002	Liu et al.				
		US - 6,415,002 B1	07/02/2002	Edwards et al.				
		US – 6,421,378 B1	07/16/2002	Fukuoka et al.				
		US - 6,438,164 B2	08/20/2002	Tan et al.				
		US - 6,452,639 B1	09/17/2002	Wagner et al.				
		US - 6,466,630 B1	10/15/2002	Jensen				
		US - 6,490,007 B1	12/03/2002	Bouillet et al.				
		US - 6,493,409 B1	12/10/2002	Lin et al.				
		US - 6,507,626 B1	01/14/2003	Limberg				
		US - 6,535,553 B1	03/18/2003	Limberg et al.				
		US - 6,611,555 B2	08/26/2003	Smith et al.				
		US – 6,734,920 B2	05/11/2004	Ghosh et al.				
		US -2001/0048723 A1	12/06/2001	Oh				
		US -2002/0024996 A1	02/28/2002	Agazzi et al.				
		US -2002/0136329 A1	09/26/2002	Liu et al.				
		US -2002/0154248 A1	10/24/2002	Wittig et al.				
		US -2002/0172275 A1	11/21/2002	Birru				
		US -2002/0172276 A1	11/21/2002	Tan et al.				
		US - 2002/0186762	12/12/2002	Xia et al.				
		US - 2002/0191716	12/19/2002	Xia et al.				
		US -2003/0058967 A1	03/27/2003	Lin et al.				

Examiner	Cite No. ¹	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
Initials*		Country Code ³ -Number ⁴ -Kind Code ⁵ (If known)	MM-DD-YYYY	Application of Cited Document	Relevant Passages or Relevant Figures Appear	

Date Considered	
	Date

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the emperor must precede the serial number of the patent document. ⁵ Kind of document by the apopropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitut	e for form 1449A/F	OTO.		Complete if Known			
Substituti	e 101 101111 1449AVF	-10		Application Number	10/701,047		
	ORMATION			Filing Date	November 4, 2003		
STATEMENT BY APPLICANT				First Named Inventor	Jingsong Xia et al.		
				Group Art Unit	2631		
(4	use as many shee	ets as ne	ecessary)	Examiner Name	Not Yet Assigned		
Sheet	5	of	5	Attornev Docket Number	31075-128		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s) publisher city and/or country where published	T²			
		Demodulation of Cochannel QAM Signals (continued); Error Detection/Correction; pages 1-3, http://www.appsig.com/papers/1813f/813f_4.html				
		Demodulation of Cochannel QAM Signals (continued); Simulation Results; pages 1-6; http://www.appsig.com/papers/1813f/813f 5.html				
		·				

Examiner Signature	Date Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the emperor must precede the serial number of the patent document. ⁵ Kind of document by the apopropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.